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EXHIBIT 1

3D MARINE

Marine Consultants and Surveyors

3D MARINE USA, INC.

12411 Donna Drive, Houston, Texas 77067 Tel (281) 444-9495 (24 hours) Fax (281) 444-8874 email: firm@3dmarine.com

29th November 2019

Our Ref. No. KCH/13328/MAF/18L

Kumpf Charsley & Hansen, LLC 9565 S. Kingston Court, Ste. 100 Englewood, CO 80112

Attn: Mr. David O. Hansen

Re: Civil Action No. 4:18-cv-00072-DN-PK

Stacey Mickelsen, Kirk R. Mickelsen. Amy V. Bellum, Ferdinand Meyer, Shannon Lee Mendoca and on behalf of the Estate and Heirs of Kirsten Meyer vs. Aramark Sports & Entertainment Services, LLC dba Lake Powell Resorts & Marinas

In the United States District Court for the District of Utah, Southern Division

and,

Civil Action No. 2:18-cv-00158-DB

In the Matter of the Complaint of Summer Paradise, Inc., Roger Comstock, Tracee Comstock, Preston Miller, Sandy Miller, Brian Horan, Kim Horan, Dave Daniels, Bud Bullard, Kristi Bullard, Craig Curtis, Earlyn Curtis, Donald Bellum, Steve Mills, Greg Pickerel, Gina Pickerel, Troy Seyfer, Glenn Lewis, Rex Rollo, Nadine Rollo, Steven Tycksen, Ruth Tycksen, Roger Cook, Colleen Cook, and Kevin Daniels as Owners or Owners Pro Hac Vice of a 2001 73-foot Stardust Houseboat "SUMMER PARADISE" for Exoneration from or Limitation of Liability

In the United States District Court for the District of Utah, Central Division

Dear Mr. Hansen,

At the request of Kumpf Charsley & Hansen, LLC, 9565 S. Kingston Court, Ste. 100, Englewood, Colorado 80112; we have reviewed the following provided depositions, reports statements and documentation, concerning the above captioned matter:

- 1) Utah State Fire Marshall Report & Photographs;
- 2) San Juan County Sheriff's Office Report;
- 3) National Park Service Report, Statements & Photographs;
- 4) M/V SUMMER PARADISE Inspection Photographs, dated 30th May 2018;
- 5) M/V SUMMER PARADISE Control Panel Photographs;
- Aramark Sports and Entertainment Services, LLC, dba Lake Powell Resorts & Marinas' Rule 26 Initial Disclosures:
- 7) Documents, Bates Nos. LPRM000001 to LPRM000387;
- 8) Petitioners' Rule 26 (a)(1) Disclosures;
- 9) Documents, Bates Nos. SUMMER000001 to SUMMER000354;
- 10) Lake Powell Resorts & Marinas Vessel Service Agreement, dated 18th June 2017;
- 11) Deposition of Mr. Donald Greig Bellum, with Exhibits;
- 12) Deposition of Mr. Donald Peter Bellum;
- 13) Deposition of Mr. Kirk Mickelsen;
- 14) Deposition of Mr. Bud Bullard, with Exhibits;
- 15) Deposition of Mr. Brian Horan, with Exhibits;
- 16) Deposition of Mr. Kayo Vannest, with Exhibits;
- 17) Deposition of Mr. Tyler Gordon, with Exhibits;

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- 18) Deposition of Mr. Ronald Preston Miller, with Exhibits;
- 19) Deposition of Capt. Joshua Summers, with Exhibit;
- 20) Deposition of Capt. Jason Grant;
- 21) Deposition of Capt. Tony Anderson, with Exhibits;
- 22) Deposition of Mr. Troy Mills, with Exhibits; and
- 23) Applications Engineering Group, Inc. Analysis Data & Images.

In addition to the above, the undersigned attended on board M/V SUMMER PARADISE while she lay in dry storage at the JNB Marine Storage Yard, Hwy 276, Mile Marker 31, Lake Powell, UT 84533, on Friday, 19th April 2019.

The undersigned also attended at Lake Powell Resorts & Marinas - Bullfrog, Utah facility, located within the Glen Canyon National Recreation Area, on Friday, 19th April 2019.

After review of the above detailed depositions, statements, reports and documentation; and our observations of M/V SUMMER PARADISE and the Lake Powell Resorts & Marinas - Bullfrog, Utah facility, we report as follows:

Description of Incident Α.

During 2001, M/V SUMMER PARADISE, a 73-foot length, houseboat, was purchased new, by a consortium of private owners, organized as Summer Paradise, Inc.

As part of the corporate agreement, each individual owner was granted one week of use, similar to a time-share agreement, in exchange for their initial "buy in" for the vessel, and continued contribution towards the corporate/vessel operating costs. In addition, each owner/member was allowed to purchase additional use of the vessel, as available, from the corporation.

One owner was designated as the vessel "Manager" with the authority to authorize certain repairs and expenditures on behalf of the corporation, Summer Paradise, Inc., and the members.

During 2017, Mr. Brian Horan was acting as the Manager for M/V SUMMER PARADISE, and had been carrying out those duties for several years. Mr. Horan received a reduction in the cost of his required corporate contribution, as compensation for his management services.

From approximately 2001 to 2017, M/V SUMMER PARADISE was home-ported at the Aramark Sports & Entertainment Services, LLC (Aramark) owned/operated Lake Powell Resorts & Marinas, Bullfrog, Utah facility, located within the National Park Service, Glen Canyon National Recreation Area, along the shores of Lake Powell.

Summer Paradise, Inc. entered into a vessel services / management contract with the Aramark entity, Northlake Executive Services, providing for management, inspection and certain maintenance of the vessel. As part of the services provided, Aramark assigned United States Coast Guard-licensed Masters (Captains), along with Aramark-employed Dockhands, Deckhands and Mechanics, to operate, navigate, maintain, inspect and, if considered necessary, repair M/V SUMMER PARADISE on a weekly basis.

In accordance with the contract, M/V SUMMER PARADISE was to be in the care, custody and control of Aramark, each Sunday during the boating season, between the hours of 0900 and 1500 for the specified and agreed "turn service".

Note: A separate Aramark owned/operated entity, Northlake Boat Shop, carried out mechanical inspections and repairs to M/V SUMMER PARADISE, in accordance with the Northlake Executive Services contract terms, and as per the request of Summer Paradise, Inc., through the vessel Manager, Mr. Horan.

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During 2015 or 2016, Donald Peter Bellum (Don), purchased a share of M/V SUMMER PARADISE. Don Bellum and is son, Donald Greig Bellum (Greig), had previously owned/rented houseboats and other vessels on Lake Powell, and had more than twenty years of boating experience. However, their previous owned/rented houseboats were not fitted with a fixed generator.

During the week of 11th June 2017, one of the corporate owners, Mr. Preston Miller, reported deficiencies with the M/V SUMMER PARADISE generator. In addition, at some point early that season, it was determined that the port main engine was inoperable. The decision was apparently made by Summer Paradise, Inc. not to repair the port engine for the remainder of the boating season.

During the week of 18th June 2017, Mr. Horan, acting as Manager of M/V SUMMER PARADISE, personally arranged for repairs to be carried out with respect to the generator, including directing Northlake Boat Shop to temporarily replace a faulty generator fuse holder with an inappropriate, non-marine grade, fuse holder from his own supply of vessel spare parts. This inappropriate, non-marine grade fuse holder was installed and being utilized at the time of the incident.

During the week of 2nd July 2017, Mr. Craig Curtis, and his family/friends, utilized their scheduled week on board M/V SUMMER PARADISE, reportedly returning to the marina during the evening of 8th July, although Mr. Greig Bellum testified that the vessel was returned "late" during the morning of 9th July, causing a delay to the scheduled, and contracted, "turn services" provided by Northlake Executive Services (Aramark), which included a mechanical inspection; re-fueling of the vessel; pumping out of the vessel sewage tanks; filling vessel water tanks; filling vessel propane tanks; and evaluating the material condition of the vessel, including operating the vessel generator under load.

During the afternoon of 9th July 2017, Mr. Don Bellum and his sons, along with other friends and family, boarded M/V SUMMER PARADISE at Slip N-15 of Bullfrog Marina.

Mr. Greig Bellum reportedly carried out the "check on" inspection of M/V SUMMER PARADISE, in company with the Aramark Quality Assurance Agent (Dockhand/Deckhand), Mr. Kayo Vannest. Greig Bellum reported observing oily rags and oily water in the engine room bilge of the vessel during the inspection process. However, reportedly, his, and/or Mr. Vannest's, only action was to move the oily rags away from the bilge pump so as not to obstruct the suction for the pump. Greig Bellum also testified that he notified Mr. Horan regarding the oily water conditions.

Greig Bellum operated/piloted M/V SUMMER PARADISE from the marina to a location within the Crystal Canyon area, approximately 6 miles north of the marina, utilizing only the starboard engine.

According to Don and Greig Bellum, M/V SUMMER PARADISE was not moved, and the main engines were not operated, after anchoring within Crystal Canyon during the evening of 9th July. However, the generator was turned on and used during the evening of 9th through 12th July.

Don and Greig Bellum also reported that, during each morning, there was a gasoline sheen on the water around the houseboat. The Bellum's did not report the conditions to any authorities, or attempt to determine the source of the gasoline spill, except to assume that the spill was coming from M/V SUMMER PARADISE.

In addition, Greig Bellum reported three to four separate instances during 9th through 12th July when the vessel engine space vapor/fume alarm sounded, indicating high levels of gasoline vapors within the space. Each time, Greig Bellum silenced the alarm by opening the engine hatch covers and "airing out" the engine space.

During the evening of 12th July, the generator was being operated, when it suddenly stopped. It was assumed by Don and Greig Bellum that the generator was out of fuel (gasoline). Subsequently, Greig Bellum utilized portable gasoline caddies stored at the stern of the vessel to refill the vessel's main internal fuel tanks.

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Mr. Mickelsen testified that both the port and starboard internal fuel tanks were topped off utilizing multiple portable fuel caddies that belonged to the Bellums, and were stowed at the stern.

After re-fueling, Mr. Greig Bellum stayed at the stern of the vessel while Don Bellum attempted, twice, to utilize the remote generator start switch at the forward helm station for the vessel. These two initial start attempts were not successful, for unknown reasons.

We note that there is conflicting testimony regarding whether or not the engine space blowers were being utilized during these first two attempts, as well as conflicting testimony regarding whether or not the starboard engine space hatch cover was open or closed during the first two attempts.

Subsequently, at approximately 2200 hours, 12th July, it was decided by Don and Greig Bellum to carry out a third attempt to start the generator. For this third attempt, Greig Bellum was at the helm station, and Don Bellum was walking aft towards the stern. Greig Bellum testified that he did not have the blower operating. He also testified that he thought the starboard engine hatch cover was still open. However, Don Bellum and Kirk Mickelsen testified that both hatch covers were closed.

Immediately after commencing the third attempt to start the generator, there was an explosion of gasoline fumes within the engine compartment, causing severe damage to the vessel.

Mr. Kirk Mickelsen was blown off of the vessel, suffering severe burns. Mr. Don Bellum was blown forward within the stern stateroom, also suffering burns. Ms. Amy Bellum and Ms. Stacey Mickelsen were both at the stern and severely injured from the blast. Ms. Kirsten Meyer, who was reportedly standing atop the starboard engine hatch cover at the time of the explosion, was thrown upwards into the overhead, and died from her injuries.

The injured persons were evacuated from the Crystal Canyon area by helicopter, and eventually transferred to hospitals in Salt Lake City, Utah and Denver, Colorado for further treatment. The remaining passengers were transported by boat to Bullfrog Marina.

Subsequently, Capt. Tony Anderson, the Aramark General Manager of Marina & Transportation Operations, and Capt. Joshua Summers, the Northlake Executive Services Manager, attended on board M/V SUMMER PARADISE at Crystal Canyon, in order to take the vessel under tow. M/V SUMMER PARADISE was towed to the local boat ramp, and transported by road trailer to the JNB Marine Storage Yard, near Lake Powell, Utah.

B. Vessel Particulars

Name: SUMMER PARADISE

Hull Identification No.: TKZ01248C101 State Registration No.: UT 6132 SG

Builder: Stardust Cruisers, Inc., Monticello, Kentucky

Year Built: 2001 Length (LOA): 73.0 ft. Length (Waterline): 62.5 ft. Breadth: 16.0 ft. Design Draft: 1.8 ft.

Propulsion: (2) MerCruiser 5.7 liter V-8 (gasoline), with Bravo 2 Outdrives

Generator: Westerbeke 12.5 kW (gasoline)

M/V SUMMER PARADISE is a state-registered (non-documented), aluminum-hull, houseboat of the standard design, with maneuvering/steering stations forward, and a single common engine space aft, serviced by two hinged hatch covers.

M/V SUMMER PARADISE is also equipped with a fixed gasoline generator, co-located within the designated propulsion engine space, along with the two (port/starboard) service fuel tanks.

C. **Methods and Analysis/Comments**

From review of the above detailed depositions, documentation, statements, photographs and reports; our observations on board M/V SUMMER PARADISE and at the Lake Powell Resorts & Marinas -Bullfrog, Utah facility, and from many years as a Ship's Officer and Captain; and subsequently as a Maritime Instructor, Marine Surveyor and Consultant, we have analyzed the facts of this case, compared them to standards within the industry and comment as follows:

The undersigned assisted with the operation and management of a family-owned marina and boat rental facility, located on South Padre Island, Texas. During this period, the undersigned also worked as a dock attendant, deckhand and boat operator; including for fueling of vessels; repair/maintenance of vessels; and client check-out procedures for charter of vessels.

Subsequently, the undersigned attended the Texas A&M University Maritime Academy at Galveston, Texas, graduating with a B.Sc. Degree in Marine Transportation and a United States Coast Guard-issued Merchant Marine Officer License.

The undersigned served as Master and Deck Officer on cargo, passenger and research vessels, operating worldwide.

In addition to the above, the undersigned has maintained continuous ownership of private recreational vessels for approximately 30 years, including both inboard propulsion, and outboard propulsion, sailing vessels and fishing boats.

The undersigned has also chartered houseboats similar to M/V SUMMER PARADISE, and is familiar with the standard practices and procedures for operating houseboats, including the safe use of fitted generators.

As a Marine Surveyor, the undersigned regularly works on board all types of vessels, for cargorelated and vessel inspection purposes. In addition, we have been retained by insurers to specifically carry out safety and operational inspections with respect to inland marinas, similar to the Lake Powell Resorts & Marinas-Bullfrog, Utah facility.

As a Marine Consultant, the undersigned has been frequently retained to evaluate and provide expert opinions regarding actions and procedures associated with marine accidents, collisions, fires, and explosions; including on board recreational vessels similar to M/V SUMMER PARADISE.

After review of the above detailed depositions, statements, reports and documentation; our observations of M/V SUMMER PARADISE and the Lake Powell Resorts & Marinas - Bullfrog, Utah Facility; and based on our experience, education, and review of the applicable regulations and industry standards; we report as follows:

I. Policies, Procedures, Guidance and Regulations

Summer Paradise, Inc. Policies & Procedures a.

Summer Paradise, Inc., as owner of M/V SUMMER PARADISE, was responsible for setting policies and procedures ensuring safe and appropriate operation of the vessel. Indeed, the Summer Paradise, Inc. Purchase Proposal specifically requires prospective owners to comply with the "RULES & REGULATIONS for the boat".

However, with respect to the incident of 12th July 2017, we note multiple procedures which were either insufficient to ensure safe operation of the vessel, or were not complied with by the Bellums during the voyage.

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Firstly, there appears to be a basic failure of Don Bellum, as an Owner of M/V SUMMER PARADISE, to specifically identify a Captain, or Person in Charge, of the vessel during the voyage.

Greig Bellum testified that Don Bellum was the Person in Charge of the vessel at the time of the incident. However, the actions of Greig Bellum during the time period; including, carrying out the "check on" procedures; navigating/piloting the vessel from the marina to Crystal Cove; handling the fume/vapor alarm alerts; taking charge of the fueling operation and directing others in the task; and making decisions regarding the timing of the generator starting actions; would indicate that Greig Bellum was acting as the Person in Charge (Captain) of M/V SUMMER PARADISE during the voyage, consistent with the testimony of Don Bellum, and the Utah State Fire Marshall's Report.

It is a basic principle of boating operational safety, that one person is identified as being the Person in Charge (Captain) for the vessel, with that person directly involved in any critical operations such as pre-departure inspections, fueling, starting engines/generators, emergency response, etc.

The lack of a defined Person in Charge of M/V SUMMER PARADISE during the voyage, increased the likelihood of significant and serious lapses in safety procedures; such as the apparent acceptance of oily water conditions within the vessel bilge; the failure to address or investigate the gasoline spill conditions each morning and frequent fume/vapor alarms; as well as the apparent closure of the starboard hatch cover, and failure to operate the engine space blower, at the time of the explosion.

In addition to the above, Mr. Horan testified that Summer Paradise, Inc. did not typically provide the various owners (members) any instructions, orientation, rules, or procedures for operating the generator, fueling the boat, addressing fume/vapor alarms, or dealing with fuel leaks.

For example, it is apparent that the port/starboard fuel tank fill location, located at the centerline stern of the vessel, immediately aft of the stern cabin entrance, was designed and fitted with a containment drain pan. This containment pan was fitted with a drain hole apparently designed to plugged by a "threaded stopper" (See attached photograph of drain from 3D Marine inspection). In maritime terms, this "stopper" is known as a "scupper plug".

Scupper plugs serve an important purpose. When fueling, the scupper plug is inserted, to prevent any fuel from escaping the containment, and allowing the Operator to easily and effectively clean any small pooled quantity of spilled fuel. However, when fueling is not occurring, the scupper plug is removed, allowing any water or other non-petroleum liquids to flow out of the containment area, and not risk any contamination to the fuel tanks seeping through the threaded fuel fill cap(s).

Most likely, M/V SUMMER PARADISE was originally equipped by the manufacturer with a scupper plug for the centerline drain pan. However, it appears that during the intervening years, it was the custom and practice of M/V SUMMER PARADISE owners, and Aramark employees, to fill the fuel tanks with the scupper plug removed, and the drain opened straight to the water.

This condition is in violation of multiple regulations and United States codes.

46 U.S.C. 4302.Regulations

(a) The Secretary may prescribe regulations—

(1) establishing minimum safety standards for recreational vessels and associated equipment, and establishing procedures and tests required to measure conformance with those standards, with each standard—

(A)meeting the need for recreational vessel safety; and

(B)being stated, insofar as practicable, in terms of performance;

(2) requiring the installation, carrying, or use of associated equipment (including fuel systems, ventilation systems, electrical systems, sound-producing devices, firefighting equipment, lifesaving devices, signaling devices, ground tackle, life- and grab-rails, and navigational equipment) on recreational vessels and classes of recreational vessels subject to this chapter, and prohibiting the installation, carrying, or use of associated equipment that does not conform with safety standards established under this section...

33 CFR183.1 Purpose and applicability.

This part prescribes standards and regulations for boats and associated equipment to which 46 U.S.C. Chapter 43 applies and to which certification requirements in Part 181 of this subchapter apply.

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33 CFR 183.3 Definitions.

Boat means any vessel—

- (1) Manufactured or used primarily for noncommercial use;
- 33 CFR 183.556 Plugs and fittings.
- (a) A fuel system must not have a fitting for draining fuel.
- 33 CFR 183.564 Fuel tank fill system.
- (a) Each fuel fill opening must be located so that a gasoline overflow of up to five gallons per minute for at least five seconds will not enter the boat when the boat is in its static floating position.

In addition, the regulations require that vessels such as M/V SUMMER PARADISE be fitted with an appropriate blower system within the engine space.

- 33 CFR 183.610 Powered ventilation system.
- (a) Each compartment in a boat that has a permanently installed gasoline engine with a cranking motor must:
 - (1) Be open to the atmosphere, or
 - (2) Be ventilated by an exhaust blower system.

(d) Each intake duct for an exhaust blower must be in the lower one-third of the compartment and above the normal level of accumulated bilge water.

- (e) More than one exhaust blower may be used in combination to meet the requirements of this section.
- (f) Each boat that is required to have an exhaust blower must have a label that:
 - (1) Is located as close as practicable to each ignition switch;
 - (2) Is in plain view of the operator; and
 - (3) Has at least the following information:

WARNING—GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING ENGINE OPERATE BLOWER FOR 4 MINUTES AND CHECK ENGINE COMPARTMENT BILGE FOR GASOLINE VAPORS.

The following is discussion and guidance for 33 CFR 183.610 from the United States Coast Guard Publication *Boatbuilders Handbook*:

Permanently installed with regard to an engine means that it is securely fastened to the boat's structure and the necessary wiring, piping and controls are connected and secured to the boat in accordance with the applicable USCG regulations, See Title 33 CFR Part 183, Subpart I, Electrical Systems and Title 33 CFR Part 183, Subpart J, Fuel Systems. The use of the term "permanently installed" is to highlight that the engine is not portable or easily removed from the boat and to differentiate it from "portable equipment".

The term **gasoline engine with a cranking motor** is used to indicate that the gasoline engine can be started from a location that is remote from the compartment where it is permanently installed. An engine without a cranking motor (starter) requires the presence of a person at the engine location in order to start the engine. Presumably, any dangerous conditions such as liquid fuel or vapors being present at the engine location would be detected by odor and/or sight and remedied before the engine is started.

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This section of the regulation addresses boats that have a permanently installed engine with a cranking motor in a compartment. To comply with the regulation one of the following alternatives must be satisfied:

- 1. The compartment must be open to the atmosphere, as defined in 183.605.
- 2. There must be an exhaust blower system installed to ventilate the compartment in which the engine is installed. An exhaust blower system consists of one or more blowers with ductwork and terminal fittings attached to the ducts.

The purpose of exhausting air is to remove potentially explosive or flammable vapors that accumulate in the engine compartment during normal operation of the boat. It is intended that the ventilation required by this regulation be sufficient to maintain safe operating conditions under normal circumstances. Ventilation cannot be relied upon to remove liquid fuel or all of the vapors that may be present if there is a leak in the fuel system.

It is important to evaluate each engine compartment design and locate the intake opening of the exhaust blower duct so it will be in the best position to remove any collected vapors.

The vapors that occur during normal operation are associated with carburetor boil-off after the engine is turned off. These vapors will flow to and collect in the lowest part of the compartment. The duct connected to the intake side of the blower is used to select the point in a compartment where the compartment air will be exhausted. The regulation requires that the exhaust blower duct opening be located in the lower one-third of the compartment. Refer to 183.630(b). Usual locations include:

- under an engine
- between engine stringers
- at a sump, possibly provided as a bilge water collecting point.

Consideration must be given to the possibility of normal bilge water accumulations covering the intake opening. Normal accumulations of bilge water occur from propeller shaft stuffing box seepage, spray while operating the boat, and rainwater. Water remaining in the boat after a bilge pump completes its normal pumping cycle would be considered normal. The opening of the exhaust blower intake duct must be above this normal level of accumulated bilge water.

The lower end of the ducts should be securely fastened to ensure the system's continued operation as intended. Normal operation of the boat or routine maintenance on the engine may result in the duct being removed from its intended pickup point.

If there is a deficiency with any of the above detailed systems or procedures, it is considered an "unsafe condition" as per the regulations related to vessel safety inspections:

33 CFR177.07 Other unsafe conditions.

For the purpose of section 4308 of Title 46, United States Code, "other unsafe condition" means a boat:

- (c) Has a fuel leakage from either the fuel system or engine, or has an accumulation of fuel in the bilges.
- (d) Does not meet the applicable ventilation requirements for tanks and engine spaces prescribed by 46 CFR 25.40 (which applies to certain boats built before August 1, 1980), or Subpart K Ventilation, of 33 CFR Part 183 (which applies to boats built after July 31, 1980);
- (e) Does not meet the requirements for backfire flame control prescribed by 46 CFR 25.35; or
- (f) Designated manifestly unsafe for a specific voyage on a specific body of water due to:
 - (1) Unsuitable design or configuration, or
 - (2) Improper construction or inadequate material condition...

David H. Scruton

Master Mariner, B.Sc., M.C.I.T.

Aramark Sports & Entertainment Services, LLC Policies & Procedures **b**.

We identified several procedures, actions, and inactions of the various Aramark Sports & Entertainment, LLC entities, related to the safe operation of vessels in general, and M/V SUMMER PARADISE specifically.

Firstly, we note that Aramark typically assigned several important tasks, related to vessel operations and inspections, to unlicensed personnel identified as Quality Assurance Agents. The Quality Assurance Agent assigned to inspect and assess M/V SUMMER PARADISE during 9th July 2017, was Mr. Kayo Vannest, an employee with only two months of experience, no professional training or licenses regarding vessel operations, and no prior houseboating experience.

Aramark variously referred to Mr. Vannest position as a Quality Assurance Agent and/or Marina Dockhand. However, it is apparent that Mr. Vannest frequently acted as a Deckhand, and regularly carried out traditional seaman's duties on board privately-owned, and Aramark-owned/operated, houseboats, under the command of an Aramark-employed, United States Coast Guard-licensed, Master (Captain). Mr. Vannest testified that he regularly transited with the vessels from the storage slips to the fuel docks, and to the pump-out docks, where he operated the dock equipment, including fueling the houseboats, and pumping out the sewage. Mr. Vannest also handled the mooring lines during these periods, operated the various work boats owned by Aramark, and secured the houseboats at the respective docks. Consequently, Mr. Vannest, at least on a part time basis, regularly acted as a crewmember on board vessels, including M/V SUMMER PARADISE.

The following are relevant regulations and guidance provided by the United States Coast Guard regarding marine employers and crewmembers:

46 CFR 16.105 Definitions of terms used in this part. Crewmember means an individual who is:

- (2) Engaged or employed onboard a vessel owned in the United States that is required by law or regulation to engage, employ, or be operated by an individual holding a credential issued under this *subchapter, except for the following:*
 - (i) Individuals on fish processing vessels who are primarily employed in the preparation of fish or fish products, or in a support position, and who have no duties that directly affect the safe operation of the vessel;
 - (ii) Scientific personnel on an oceanographic research vessel;
 - (iii) Individuals on industrial vessels who are industrial personnel, as defined in this chapter: and
 - (iv) Individuals not required under part 15 of this subchapter who have no duties that directly affect the safe operation of the vessel.

Operation means to navigate, steer, direct, manage, or sail a vessel, or to control, monitor, or maintain the vessel's main or auxiliary equipment or systems. Operation includes:

- (a) Determining the vessel's position, piloting, directing the vessel along a desired trackline, keeping account of the vessel's progress through the water, ordering or executing changes in course, rudder position, or speed, and maintaining a lookout;
- (b) Controlling, operating, monitoring, maintaining, or testing: the vessel's propulsion and steering systems; electric power generators; bilge, ballast, fire, and cargo pumps; deck machinery including winches, windlasses, and lifting equipment; lifesaving equipment and appliances; firefighting systems and equipment; and navigation and communication equipment; and
- (c) Mooring, anchoring, and line handling; loading or discharging of cargo or fuel; assembling or disassembling of tows; and maintaining the vessel's stability and watertight integrity.

The following are excerpts from the "Frequently Asked Questions" section within United States Coast Guard publication *Marine Employers Drug Testing Guidance* (September 2009):

Do I need a chemical-testing program?

A prevailing question that smaller commercial operators (employing only one or two employees) often ask is "Do the chemical testing regulations apply to me?" The answer is a big "Yes". The chemical testing regulations apply to most commercial vessel operations regardless of the number of employees and regardless of whether the vessel is inspected or uninspected. This includes "guide services" and self-employed mariners.

Do "independent contractors" or part time crewmembers need to be part of a marine employer's chemical testing program?

Again, the answer is "yes". If an individual meets the definition of a crewmember, as described in 46CFR16.105, they must be part of the chemical-testing program, regardless of how short the time period they work on board the vessel.

I operate a seasonal business. My crewmembers are college students that I hire at the start of the season and employ for about 5 months. Are these crewmembers required to be chemically tested?

Yes. First, each crewmember will have to be pre-employment tested unless they meet criteria for an exemption under 46 CFR 210. Secondly, these crewmembers must be subject to random testing during the season. You as the marine employer are then responsible for ensuring that 50% of all the deckhands you hire are randomly tested. Additionally, you as the Marine employer must make sure those tests are spread reasonably throughout the operating season.

Note: The typographical error in the above should actually refer to 46 CFR 16.210 for "exemptions", of which, no exemptions are applicable to this matter.

Capt, Anderson testified that Aramark maintained a drug and alcohol testing program for all Aramark-employed, United States Coast Guard-licensed, individuals. However, neither Mr. Vannest, nor any other Quality Assurance Agents / Marina Dockhands, were included within the required periodic and random Department of Transportation (DOT) drug testing protocols for marine service crewmembers, despite the regulations from 46 CFR Part 16 requiring Aramark to do so.

In addition, we note that Mr. Vannest in particular, appeared to be inadequately trained and/or knowledgeable regarding basic marine safety& environmental procedures and precautions.

For example, one of the primary risks when fueling any vessel tank, is the risk for overflow, through the fill pipe, and/or through the vent pipe(tube). However, Mr. Vannest testified that he did not inspect, or even specifically observe, the fuel tank vents of houseboats such as M/V SUMMER PARADISE. Indeed, if he had for this matter, he would most certainly have observed the missing external port drain fitting (located adjacent to the port fuel tank vent piping), and the associated hole through the hull into the engine compartment.

Any reasonably experienced Deckhand or licensed Master carrying out fueling duties should have been trained by Aramark to observe and monitor the fuel tank vents during loading operations, primarily to avoid any fuel overflow or pollution incident.

In addition, various Aramark current and former employees testified that there was no procedure or policy to carry out a visual inspection of the hull at any time during the "turn service" or 1-hour mechanical inspection. We find this policy omission by Aramark to be remarkable. As with renting a car, there should always be a visible physical damage inspection carried out to identify the nature and extent of any significant indentations, scratches. For a houseboat, potential physical damages could also include missing cleats, damaged vent caps, hull breaches, etc., that might affect the watertight integrity of the vessel.

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Regardless of damage liability issues to the responsible operator, a visual inspection is also a safety issue that any reasonable and professional licensed officer should carry out before assuming command of a vessel.

During our attendance at Bullfrog Marine, Slip N-15, it was readily apparent that a vessel side shell visual inspection could be easily carried out, and would likely take less than a minute or so. This is confirmed through the various provided Aramark videos, which also clearly demonstrate the available space and visibility of the vessel side shell, while moored within the slip.

We also note that Mr. Greig Bellum testified that both he and Mr. Vannest observed oily water in the bilge of M/V SUMMER PARADISE during the "check on" survey carried out on 9th July 2017.

While we certainly fault Mr. Bellum for failing to clean the oily water, or attempt to determine the source, we similarly fault Mr. Vannest for failing to notify his superiors regarding the conditions, so that investigations could be made, potentially discovering the source and/or cause for the oily water collection within the M/V SUMMER PARADISE bilge.

II. Aramark (Northlake Boat Shop) Inspections, Repairs and Modifications of M/V SUMMER PARADISE

During our attendance on board M/V SUMMER PARADISE, and from review of photographs and related documentation, we noted several deficient conditions of M/V SUMMER PARADISE apparently related to the actions/inactions of Aramark's Northlake Boat Shop.

Firstly, it is undisputed that Northlake Boat Shop installed an inappropriate, non-marine grade generator fuse holder, less than one month before the explosion incident.

While the undersigned is aware that the electrical component was installed as per the request of the M/V SUMMER PARADISE Manager, Mr. Horan; and utilizing inappropriate parts supplied by Mr. Horan; we consider that the Aramark Mechanic, Mr. Jason Grant, had both the authority, and the duty, to refuse Mr. Horan's request, and not install potentially unsafe electrical components within an enclosed space supposedly protected by powered ventilation components.

While it is unknown if any spark or ignition source occurred due to this electrical installation, it is a basic principle of electrical maintenance/repair to use appropriate electrical components, rated for the prevailing environmental conditions.

The undersigned also closely observed the recessed containment pan at the stern centerline of the vessel, and serving both port/starboard internal fuel tanks. While Northlake Boat Shop personnel did not apparently participate in the weekly fueling operations for M/V SUMMER PARADISE, the Boat Shop personnel had reportedly carried out repairs to the area previously, during 2010. A rectangular section of the main deck, immediately aft of the fuel containment recessed area, was cut out and removed by Northlake Boat Shop personnel. We understood that the section was removed in order to better access the fuel tanks and associated tank fill piping.

However, whenever repairs to the fuel tanks/filling system were completed, the deck section was not reinstalled (welded) into position. Instead, the Northlake Boat Shop personnel left the rectangular section unsecured, and resting atop newly installed recessed framing at the sides of the insert plating.

Incredibly, the forward most section of recessed support framing was secured by drilling three holes through the base of the containment pan and inserting three machine screws to hold the support frame to the containment pan. The result of this repair, is that the watertight integrity of the recessed containment pan was wholly compromised. <u>Any</u> liquids, (water, fuel, etc.) which collected within the recessed containment pan, would drain out of the containment immedaitely, either through the fitted drain hole (if no scupper plug installed), or directly into the engine space bilge through the

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three support frame holes created by Northlake Boat Shop personnel.

In addition to the above, we noticed that the fill pipe housings themselves for the port/starboard fuel tanks were secured to the containment pan utilizing multiple sheet metal and/or wood screws. The use of these type screws is inappropriate. The fill pipe housings should be fitted to the containment pan using gasoline- resistant gasket material and secured, tightly, with a nut/bolt arrangement.

It is unknown if Northlake Boat Shop was the entity that installed inappropriate screws for the fuel tank fill pipe housings. However, the Northlake Boat Shop repairs to the area during 2010 suggest that the screws were installed at that time. At a minimum, Northlake Boat Shop Mechanics should have recognized the potential leaking hazard and replaced the screws with a nut/bolt arrangement prior to July 2017.

Of course, there is also the issue of the apparent fractured drain piping, and potential for gasoline to spill overboard, or into the bilge, during fueling operations. Capt. Tyler testified that if he had observed the condition, he would have arranged for repairs to the area, which would have amounted to less than approximately \$500.00.

As per the Northlake Executive Services contract, Northlake Boat Shop had authorization to conduct repairs up to \$500.00, without seeking approval or authorization from Summer Paradise, Inc.

We note that the hull modifications carried out by Northlake Boat Shop in 2010 most certainly resulted in M/V SUMMER PARADISE being in an "unsafe condition" on 12th July 2017, as per 33 CFR Part 177; and no longer in compliance with 33 CFR Part 183 Subpart J, as detailed previously within this report.

III. Additional Comments

The above detailed equipment conditions and procedures describe precautions and control measures for avoiding development of a hazardous atmosphere within an enclosed space, as well as limiting the potential for ignition of a hazardous atmosphere if one does develop in the space.

What is known in regards to the incident of M/V SUMMER PARADISE, was that excess gasoline liquid and vapor conditions were present within the engine space, likely for days, prior to 12th July.

This is evidenced by the presence of gasoline in the water during the previous mornings, as well as the explosion itself, which is attributable to collection of excessive gasoline fumes/vapors, as warned by the onboard vapor detector on multiple occasions prior to 12th July.

The exact source of the gasoline liquid and vapors being present within the engine space has not been determined. However, it is apparent that the improper and inappropriate repairs/modifications to M/V SUMMER PARADISE; combined with inadequate and unsafe policies, practices and procedures of Summer Paradise, Inc., Don and Greig Bellum, and the various Aramark Sports & Entertainment, LLC entities; all caused, and/or contributed to, the hazardous situation that developed on board M/V SUMMER PARADISE and the subsequent explosion.

Once leaked/spilled gasoline liquid was present within the engine space bilge, it could easily have vaporized naturally due to the heat, or been aerosolized during typical bilge pump operations, creating the hazardous/explosive atmosphere.

D. Opinions

Based on the above analysis of the case in question, we are of the following additional opinions:

- 1) Firstly, we are of the opinion that Summer Paradise, Inc., and the vessel Manager, Mr. Brian Horan, had a responsibility and duty to establish and enforce appropriate safety/operational policies and procedures with respect to M/V SUMMER PARADISE.
 - Summer Paradise, Inc. also had the responsibility to ensure M/V SUMMER PARADISE was maintained in a reasonable and safe material condition, utilizing appropriate parts/supplies, and remaining in compliance with applicable operational safety & pollution regulations.
 - However, we are of the opinion that Summer Paradise, Inc. failed to meet their obligations and responsibilities as owner/operator of M/V SUMMER PARADISE, which we consider to be a cause of, or contributing factor to, the explosion on board the vessel during 12th July 2017.
- 2) We are of the opinion that Mr. Don Bellum and Mr. Greig Bellum had a responsibility and duty to operate M/V SUMMER PARADISE in safe and appropriate manner, for the safety of themselves, their passengers, the environment, and their fellow owners.
 - Don and Greig Bellum failed to operate M/V SUMMER PARADISE in a reasonable or safe manner, ignored warning signs regarding the presence of potential hazardous conditions, and apparently failed to follow basic safety procedures during the fueling of the vessel and attempts to start the vessel generator.
 - We consider the actions/inactions of Don and Greig Bellum to be a cause of, or contributing factor to, the explosion on board the vessel during 12th July 2017.
- 3) We are further of the opinion that the Aramark Sports & Entertainment Services, LLC affiliate, Northlake Executive Services, as executive management for the vessel, had a responsibility and duty to establish and enforce appropriate safety/operational policies and procedures with respect to M/V SUMMER PARADISE.
 - Aramark employed United States Coast Guard-licensed Masters (Captains) and certified Mechanics that should have been qualified to appropriately assess the condition of M/V SUMMER PARADISE, prior to Aramark operation, or use of the vessel by the ownership group, Summer Paradise, Inc.
 - However, we are of the opinion that Northlake Executive Services, failed to meet their obligations and responsibilities as executive management of M/V SUMMER PARADISE, which we consider to be a cause of, or contributing factor to, the explosion on board the vessel during 12th July 2017.
- 4) In addition, we are of the opinion that the Aramark Sports & Entertainment Services, LLC affiliate, Northlake Boat Shop; as the designated, and contractually required, maintenance/repair contractor for the vessel; had a responsibility and duty to ensure any repairs/modifications to the vessel were appropriate and remained in compliance with applicable safety and operational regulations.
 - Aramark employed Mechanics that should have been qualified to carry out repairs to M/V SUMMER PARADISE in accordance with applicable regulations, and should have recognized any hazardous or substandard conditions during their weekly, contractually mandated, mechanical safety inspections.
 - However, we are of the opinion that Northlake Boat Shop failed to meet their obligations and responsibilities as the repair contractor, and mechanical inspector, of M/V SUMMER PARADISE, resulting in the vessel being in an "unsafe condition", which we consider to be a cause of, or contributing factor to, the explosion on board the vessel during 12th July 2017.

We reserve the right to amend or supplement this opinion should further information be made available.

Without prejudice,

Mu Jyili

Marc A. Fazioli 3D Marine USA, Inc.

The opinions expressed in this report are based upon a review of the documentation provided. This report, including the opinions and analyses contained within, is the product of an application of the preparer's experience and knowledge in the context of the material provided in this matter and cannot be applied to other situations or incidents, no matter how similar they may be. Furthermore, this report does not attempt to resolve conflicts, nor is it intended to discredit witnesses or experts, and is produced bearing in mind that it is normal for conflicts to exist between the accounts of witnesses.

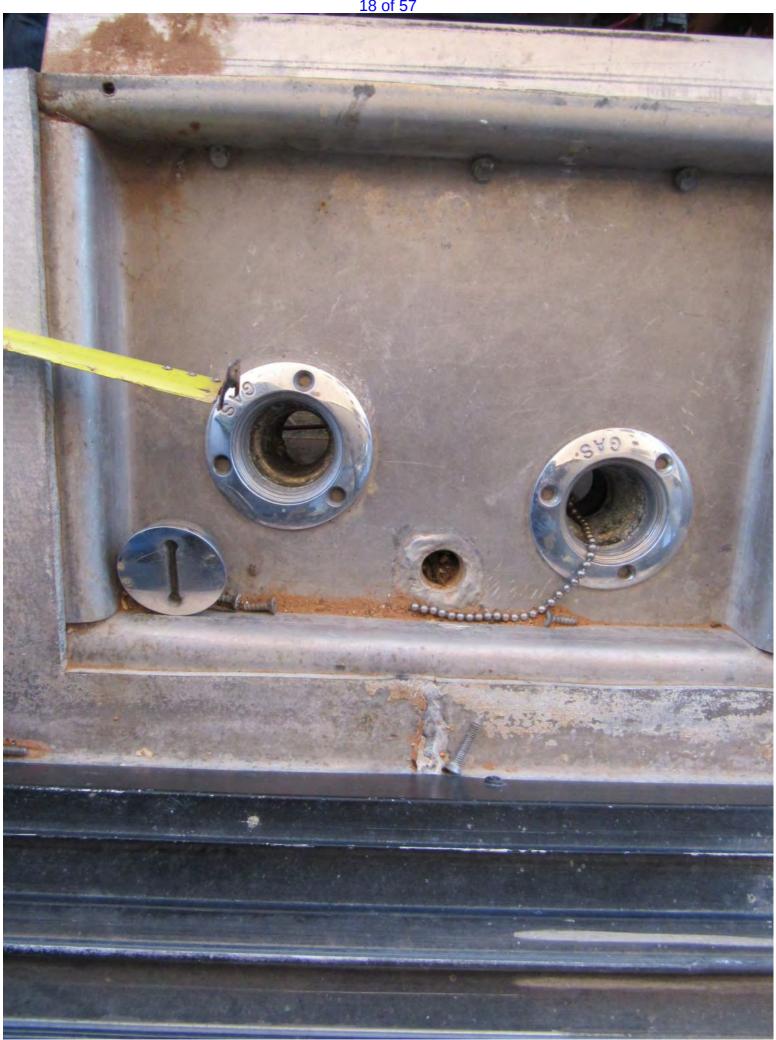
Attachments:

- i) Photographs of M/V SUMMER PARADISE Recessed Containment
- ii) Excerpts from Boatbuilders Handbook
- iii) Excerpts from Marine Employers Drug Testing Guidance
- iv) CV and Details for Marc Fazioli

i) Photographs of M/V SUMMER PARADISE Recessed Containment Pan



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ii) Excerpts from Boatbuilders Handbook





BOATBUILDER'S HANDBOOK

[REVISED NOVEMBER, 2003]



Powered Ventilation

FEDERAL LAW:

183.610 Powered ventilation system.

- (a) Each compartment in a boat that has a permanently installed gasoline engine with a cranking motor must:
 - (1) Be open to the atmosphere, or
 - (2) Be ventilated by an exhaust blower system.

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Permanently installed with regard to an engine means that it is securely fastened to the boat's structure and the necessary wiring, piping and controls are connected and secured to the boat in accordance with the applicable USCG regulations. See Title 33 CFR Part 183, Subpart I, Electrical Systems and Title 33 CFR Part 183, Subpart J, Fuel Systems. The use of the term "permanently installed" is to highlight that the engine is not portable or easily removed from the boat and to differentiate it from "portable equipment".

The term **gasoline engine with a cranking motor** is used to indicate that the gasoline engine can be started from a location that is remote from the compartment where it is permanently installed. An engine without a cranking motor (starter) requires the presence of a person at the engine location in order to start the engine. Presumably, any dangerous conditions such as liquid fuel or vapors being present at the engine location would be detected by odor and/or sight and remedied before the engine is started.

This section of the regulation addresses boats that have a permanently installed engine with a cranking motor in a compartment. To comply with the regulation one of the following alternatives must be satisfied:

- 1. The compartment must be open to the atmosphere, as defined in 183.605.
- 2. There must be an exhaust blower system installed to ventilate the compartment in which the engine is installed. An exhaust blower system consists of one or more blowers with ductwork and terminal fittings attached to the ducts.

TO COMPLY WITH THE LAW

- *Is there a gasoline engine permanently installed in the compartment?*
- Does the gasoline engine have a cranking motor (starter)?

If you have answered NO to either of the above, see 182.620, Natural Ventilation.

If you have answered YES to both of the above, then you must answer YES to one of the following:

- Is the compartment open to the atmosphere? See 183.605 for requirement.
- Is there an exhaust blower system? See 183.610, (b) through (f), for requirements.

FEDERAL LAW:

183.610 Powered ventilation system.

(b) Each exhaust blower or combination of blowers must be rated at an air flow capacity not less than that computed by the formulas given in Table 183.610 Column 2. Blower rating must be determined according to AMCA Standard 210-74, Figure 12, or UL Standard 1128.

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TABLE II 183.610

Column 1	Column 2	Column 3
Net Compartment Volume (V) of Engine Compartment and Compartments Open Thereto in Cubic Feet (ft.3)	Rated Blower Capacity (Fr) in Cubic Feet Per Minute (cfm)	Blower System Output (Fo) in Cubic Feet Per Minute (cfm)
Below 34 34 to 100 Over 100	Fr = 50 Fr = 1.5V Fr = V/2 + 100	$F_0 = 20$ $F_0 = 0.6V$ $F_0 = 0.2V + 40$

Net compartment volume is the result of subtracting the volume of permanently installed items such as the engine(s), fuel tanks, equipment and accessories from the total compartment volume of the compartment. A discussion of the items that may or may not be included, and suggestions for accounting for engines and fuel tanks appears as part of the discussion under 183.605 of this guideline.

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The regulation is not specific about compartments that adjoin a compartment which qualifies as open to the atmosphere. The following discussion presents acceptable ways of handling this problem but they are not necessarily the only ways.

A compartment adjacent and connected to a compartment that is open to the atmosphere may be considered open to the atmosphere if:

The total of all open areas directly exposed to the atmosphere from both compartments is at least 15 square inches for each cubic foot of the combined net compartment volumes.

Long narrow compartments should have openings at each end or along the sides if they are to be considered open to the atmosphere.

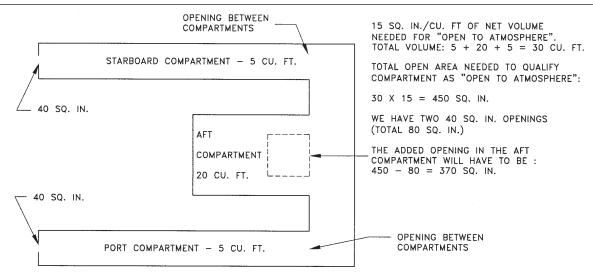
See Figure 4 for diagrams of connecting compartments.

REMOVABLE ENCLOSURES

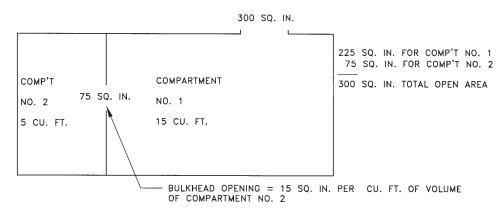
Fabric weather enclosures are not airtight and must be opened in order to enter the boat. Upon entering, any gasoline vapors present should be detectable by means of their odor. If an open compartment is covered by removable fabric weather enclosures, the enclosure may be ignored. The actual ventilation openings should remain outside of the weather enclosure. Snap-in bulkheads, such as motor well curtains, are not weather enclosures and may require the enclosed compartment to be ventilated.

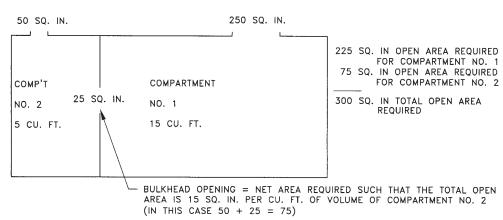
Connecting Compartments Qualifying as "Open to the Atmosphere" FIGURE 4

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NOTE: THE PRINCIPLE DEPICTED ABOVE MAY BE APPLIED TO I/O (STERNDRIVE) BOATS WITH SKI RACKS ALONG THE SIDES, OR TO BOATS WITH BOTTOM COMPARTMENTS BETWEEN THE STRINGERS.





SCREENS AND LOUVERS

If openings to a compartment are screened or louvered, the area of the opening is the aggregate net open area of the screen or louver. The compartment volume is determined by the average cross section of the compartment in square feet and multiplied by the length of the compartment in feet. This computation will give the compartment volume in cubic feet. For an irregular compartment, the volumes of portions of the compartment may be computed separately and then the volumes combined to get the total compartment volume. To get the net compartment volume, subtract the volume of the installed items as referred to in 183.605.

The net volume of adjoining compartments may have to be added to the engine compartment volume. The following rules apply:

<u>ADD</u> — If the area of openings between compartments is more than 2% of the area of the separation structure; i.e. bulkheads, stringers, frames, etc.

<u>DO NOT ADD</u> — If the area of openings between compartments is equal to or less than 2% of the area of the separation structure; i.e. bulkheads, stringers, frames, etc.

The total net volume of the engine compartment and all other connecting compartment volumes are required to be ADDED. See Column 1 of Table 183.610. These volumes are used to determine the required rated blower capacity and the blower system output. See Columns 2 and 3 of Table 183.610.

RATED BLOWER CAPACITY — TABLE 183.610 COLUMN 2

The air flow capacity rating (Fr) of blowers is determined by one of the following procedures:

- 1. AMCA Standard 210-74, Figure 12 or UL Standard 1128. The UL Standard is specifically for testing marine blowers. See the appendix for the reference.
- 2. This information may be found in the information supplied by the blower manufacturer.

BLOWER SIZE SELECTION

The total rated capacity of the required blower or blowers (Fr) is based on the net compartment volume (V) as specified in Table 183.610. One or more blowers may be used to provide the required capacity. Figure 5 is a graph of rated blower capacity versus net compartment volume.

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Example 1 — The net compartment volume of an engine compartment in a boat is 20 cubic feet (Below 34; See Table 183.610).

The required rated blower capacity is 50 cubic feet per minute.

Normally one blower will satisfy the requirement for this compartment.

Example 2 — The net compartment volume of an engine compartment is 100 cubic feet (34 to 100 cu. ft.; See Table 183.610).

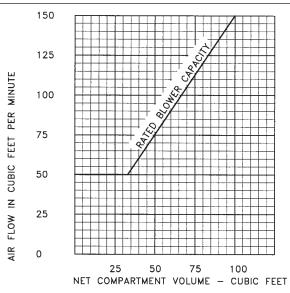
The required rated blower capacity is 150 cubic feet per minute. $(1.5 \times 100 = 150)$

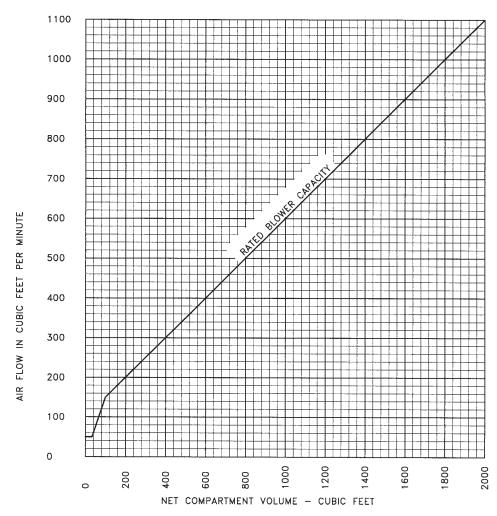
Two blowers could be used to satisfy this requirement — one rated at 100 cubic feet per minute and one rated at 50 cubic feet per minute. One 150 cubic feet per minute blower would satisfy the requirement that Fr = 1.5 V. Blowers with higher capacity ratings than the minimum may be used.

Example 3 — The net compartment volume of an engine compartment is 800 cubic feet (over 100 cu. ft.; See Table 183.610). The rated blower capacity required in this installation is 500 cubic feet per minute (800/2 + 100 = 500).

One, two or more blowers may be used to satisfy this requirement. Using readily available marine blowers, two 200 cubic feet per minute blowers and one 100 cubic feet per minute blower might be selected. Blowers with higher capacity ratings than the minimum may be used.

FIGURE 5 **Rated Blower Capacity**





TO COMPLY WITH THE LAW

Answer YES to one of the following:

Is the blower rated in accordance with AMCA Standard 210-74, or

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Is the blower rated in accordance with UL Standard 1128 as evidenced by the display of the UL Marine label?

If the answer is NO in both cases, then the boatbuilder must rate the blower in accordance with one of the above referenced standards. See Appendix.

Having determined the net compartment volume in Column 1, is the rated blower capacity of the blower or blowers selected at least that required in Column 2, Table 183.610?

FEDERAL LAW:

183.610 Powered ventilation system.

(c) Each exhaust blower system required by paragraph (a)(2) of this section must exhaust air from the boat at a rate which meets the requirements of Table 183.610, Column 3 when the engine is not operating.

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TABLE III 183.610

Column 1	Column 2	Column 3
Net Compartment Volume (V) of Engine Compartment and Compartments Open Thereto in Cubic Feet (ft.3)	Rated Blower Capacity (Fr) in Cubic Feet Per Minute (cfm)	Blower System Output (Fo) in Cubic Feet Per Minute (cfm)
Below 34 34 to 100 Over 100	Fr = 50 Fr = 1.5V Fr = V/2 + 100	Fo = 20 Fo = $0.6V$ Fo = $0.2V + 40$

Columns 1 and 2 were discussed under 183.610(b).

COLUMN 3 — Blower System Output

A blower system includes the items and devices used to convey ventilation air flow into and out of a boat. Examples of such items and devices, but not excluding others, are as follows (Note: other items and devices may be part of a blower system):

- Blower(s)
- Ducting
- Terminal fittings
- Cowls, scoops, funnels

183.

The air flow required (Fo) for the exhaust blower system, like the rated blower capacity, is based on the net compartment volume, V, shown in Column 1 of Table 183.610. The blower system output is stated in Column 3 of Table 183.610. These blower system output requirements establish the minimum efficiency permitted (40%) for an exhaust blower system design. Each item or device used in a blower system offers resistance to the air flow available at the blower. Consider the following when designing a blower system:

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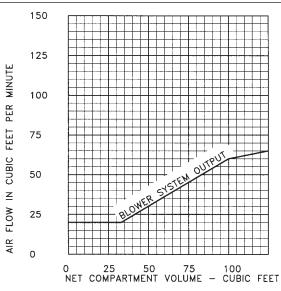
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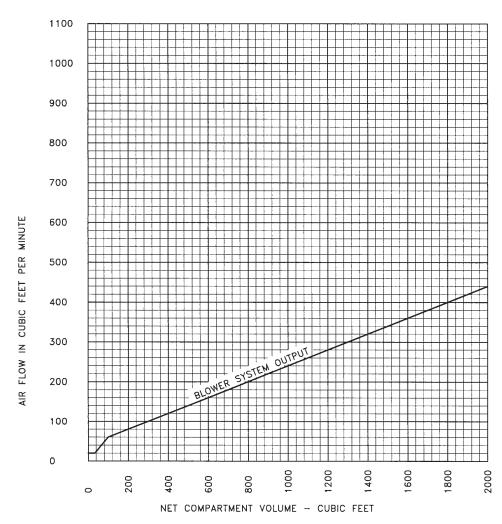
- Duct resistance
- Duct bend resistance: the tighter the bend, the higher the resistance
- Terminal fittings: end brackets, Y fittings, adapters, etc.
- The distance of the duct opening away from a surface that could obstruct air flow.
- Cowl, scoop or funnel resistance
- Screen resistance
- Dorade box resistance

The above list is not intended to exclude any item or device in the blower system that might offer resistance to air flow.

If more than one blower is used, the blower system output is the total quantity of air from all blowers, in cubic feet per minute, exhausted from the boat. Figure 6 is a graph of the minimum blower system output required versus net compartment volume.

FIGURE 6 **Minimum Blower System Output**





EXHAUST BLOWER SYSTEM AIR FLOW DETERMINATION

During the process of rating a blower, curves of blower performance are usually developed and are required to be tested in accordance with the UL 1128 Marine Blower standard. The curves show air flow for various static pressures and record the current and RPM of the blower at these air flows. See Figure 7 for typical blower curves.

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VENTILATION SYSTEM DESIGN

In designing a powered ventilation system, it is helpful to have an idea of what the system output might be before the boat is built. The rules of thumb presented here are based on data accumulated from a number of isolated tests. The data is not to be used to determine compliance with the regulation but only to estimate the blower system output. See Table II below.

TABLE IV Estimated Effect of Blower System Components

Item	Percent Loss of Blower Rated Capacity
Ducting	2% per ft. of length
Ducting bends — 90°	10% each bend
Clamshell	20%
Louver	20%
Screen — 1/4" mesh	10%

NOTE:

Lower resistance items may be selected resulting in an improved system efficiency

Example: A contemplated blower system has a 5 foot duct (10%), one 90° bend (10%), a clamshell (20%) and a screen (10%). Therefore, the estimated blower system output is 50% less than the blower rated capacity.

Because the performance of axial flow, in-line blowers are highly dependent upon the propeller design and other factors selected by the blower manufacturer, the estimated effects of the airflow resistances in Table II will be unpredictable. If an axial flow blower is installed in the output system, an airflow meter, pitot tube or other system recommended by the blower manufacturer must be used to check the actual output of the ventilation system as installed in the boat.

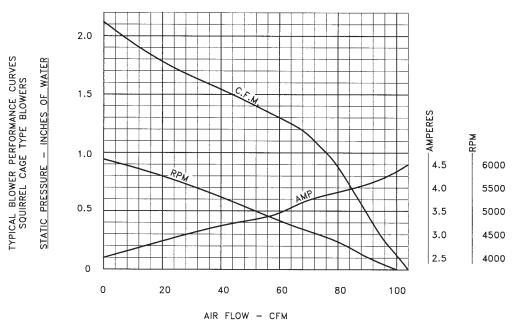
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Typical Blower Performance Curves FIGURE 7

AIR FLOW (CFM) vs STATIC PRESSURE (INCHES OF WATER)

MANUFACTURER: RQZXTY VOLTAGE: 12 VOLTS D.C. AIR DENSITY LBS/FT 0.0736

MODEL: XTC999 CORRECTED TO 0.075 MOTOR:XXX-00

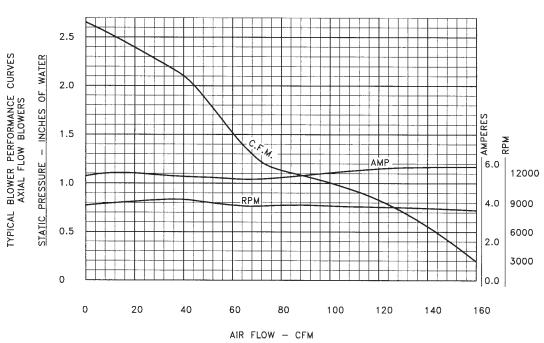


AIR FLOW (CFM) vs STATIC PRESSURE (INCHES OF WATER)

MANUFACTURER: RQZXTY VOLTAGE: 12 VOLTS D.C. AIR DENSITY LBS/FT³ 0.0736

MODEL: XTC999 MOTOR:XXX-00

CORRECTED TO 0.075



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Obtaining the air flow of an exhaust blower system, using the blower performance curves, is an easy task. The following outlines three methods which may be used on an installed system:

METHOD 1 — Current Measurement.

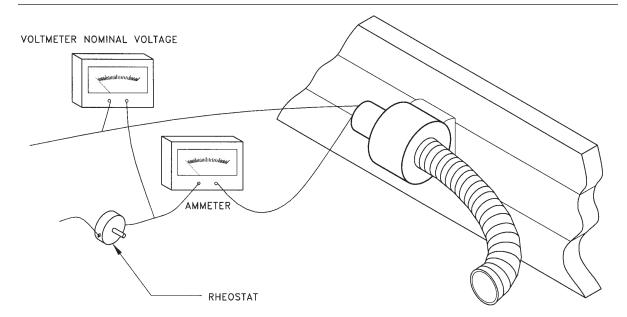
See Figure 8.

- **Step 1.** Connect an ammeter into the wiring going to the blower.
- Energize the blower at its nominal voltage; e.g. 12, 24, 32 volts, etc. A rheostat may Step 2. be needed to control the voltage.
- Read the current draw in amperes. The engine should not be operating while taking Step 3. the reading.
- Enter the performance curves at the determined amperage and read the air flow in Step 4. cubic feet per minute (c.f.m.)

NOTE:

This current measurement method does not provide accurate results for in-line, axial flow blowers.

Method 1 — Current Measurement FIGURE 8



METHOD 2 — **RPM Measurement.**

See Figure 9

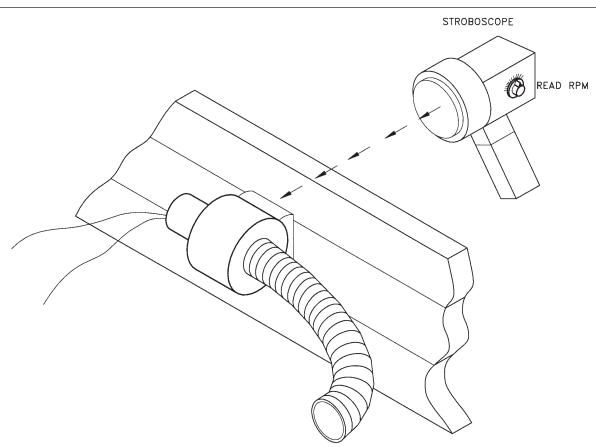
Step 1. Energize the blower at nominal voltage; i.e. 12, 24, 32 volts, etc. A rheostat may be needed to control the voltage.

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- Step 2. Determine the RPM of the blower. A stroboscope is one instrument that is used to read RPM of rotative machinery. The boat's engine should not be operating during the testing process. Carefully follow the test procedures supplied with the instrument to avoid a false reading.
- Enter the performance curves at the determined RPM and read the air flow in cubic Step 3. feet per minute (c.f.m.)

FIGURE 9 Method 2 — RPM Measurement



The above methods are accurate for determining the effective air flow of an exhaust blower system with a squirrel cage (radial fan). There are many instruments that measure air velocity in feet per minute.

METHOD 3 — Air Velocity Measurement

To obtain air flow in cubic feet per minute:

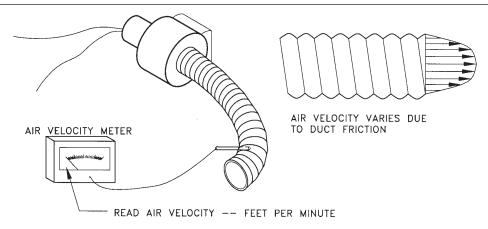
<u>Step 1.</u> Determine the cross section of the duct, at the measuring point, in square feet.

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- Step 2. Determine the average air velocity across the duct at the measuring point. The air velocity varies from the duct surface to the center of the duct. See Figure 10.
- Step 3. Multiplication of the cross section in square feet by the average air velocity in feet per minute will provide the air flow in cubic feet per minute (c.f.m.).

This method depends on the ability to determine an accurate average air velocity. This is probably the only method that will work for axial flow type blowers. It is possible to develop a correlation between this method and Methods 1 or 2 in which case this method may prove satisfactory. If you are familiar with duct air flow theory and the associated formulas, all the above could be used.

FIGURE 10 Method 3 — Air Velocity Measurement



TO COMPLY WITH THE LAW

Having determined the net compartment volume, Column 1:

Is the exhaust blower system output at least that required in Column 3 when the engine is not operating?

Page

FEDERAL LAW:

183.610 Powered ventilation system.

(d) Each intake duct for an exhaust blower must be in the lower one-third of the compartment and above the normal level of accumulated bilge water.

The purpose of exhausting air is to remove potentially explosive or flammable vapors that accumulate in the engine compartment during normal operation of the boat. It is intended that the ventilation required by this regulation be sufficient to maintain safe operating conditions under normal circumstances. Ventilation cannot be relied upon to remove liquid fuel or all of the vapors that may be present if there is a leak in the fuel system.

It is important to evaluate each engine compartment design and locate the intake opening of the exhaust blower duct so it will be in the best position to remove any collected vapors.

The vapors that occur during normal operation are associated with carburetor boil-off after the engine is turned off. These vapors will flow to and collect in the lowest part of the compartment. The duct connected to the intake side of the blower is used to select the point in a compartment where the compartment air will be exhausted. The regulation requires that the exhaust blower duct opening be located in the lower one-third of the compartment. Refer to 183.630(b). Usual locations include:

- under an engine
- between engine stringers
- at a sump, possibly provided as a bilge water collecting point.

Consideration must be given to the possibility of normal bilge water accumulations covering the intake opening. Normal accumulations of bilge water occur from propeller shaft stuffing box seepage, spray while operating the boat, and rainwater. Water remaining in the boat after a bilge pump completes its normal pumping cycle would be considered normal. The opening of the exhaust blower intake duct must be above this normal level of accumulated bilge water.

The lower end of the ducts should be securely fastened to ensure the system's continued operation as intended. Normal operation of the boat or routine maintenance on the engine may result in the duct being removed from its intended pickup point.

TO COMPLY WITH THE LAW

Is the intake opening of the exhaust blower duct:

- Located in the lower one-third of the compartment?
- Above the normal level of accumulated bilge water?

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FEDERAL LAW:

183.610 Powered ventilation system.

> (e) More than one exhaust blower may be used in combination to meet the requirements of this section.

This section authorizes the use of more than one blower in a compartment in order to provide the required rated blower capacity and the required blower system output. Using two or more blowers in combination means they must be energized together. The use of one or more blowers is discussed in a previous section.

FEDERAL LAW:

183.610 Powered ventilation system.

- (f) Each boat that is required to have an exhaust blower must have a label that:
 - (1) Is located as close as practicable to each ignition switch;
 - (2) Is in plain view of the operator; and
 - (3) Has at least the following information:

WARNING

GASOLINE VAPORS CAN EXPLODE. BEFORE STARTING ENGINE OPERATE BLOWER FOR 4 MINUTES AND CHECK ENGINE COMPARTMENT BILGE FOR GASOLINE VAPORS.

If a blower is required on a boat, there must be a label affixed to the boat. The label must be located so that the following requirements are satisfied:

- It must be near the ignition switch(es), and
- It must be able to be seen by an operator who is in a normal position to operate the ignition switch(es)

Page

Examples of Label Locations

1. If the ignition switch(es) is (are) on the side of a console then the label(s) should be on the top visible surface of the console above the switch(es)

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- 2. If two ignition switches are located next to each other, then one label serves both switches.
- 3. If two or more ignition switches are provided for one engine as might be the case with a boat with two steering stations then a label must be affixed to each location. A boat with a flying bridge has two steering stations.
- 4. If a boat is equipped with auxiliary gasoline powered equipment such as a generator, then the ignition switch location for this equipment must have a label.
- 5. If the switch is located in a position which may not be readily visible from the helm; i.e. on the side of a console, two labels are needed. Locate one label near the switch and the other on the console in a location visible from the helm, near the throttle.

The label must contain the information specified in the regulation. It does not have to be stated in the exact words used but it must deliver the same message.

An acceptable label consists of the following four elements:

1. The signal word WARNING

2. The hazard **GASOLINE VAPORS**

3. Consequences of the hazard CAN EXPLODE

4. Action required BEFORE STARTING ENGINE

OPERATE BLOWER 4 MINUTES

Additional information my be included on the label.

The following is an example of a prepared label:

WARNING

GASOLINE VAPORS CAN EXPLODE. **BEFORE STARTING ENGINE** CHECK ENGINE COMPARTMENT FOR GASOLINE OR VAPORS AND OPERATE BLOWER FOR 4 MINUTES

PageID.2410

TO COMPLY WITH THE LAW

- Is a blower required? If YES, then:
- Is there a label installed? If YES, then:
- Is there a label near each engine and generator ignition switch, and is the label located so that the boat operator can read it?
- Does the label contain the information required by 183.610(f)(3)?

Document 159-1

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iii) Excerpts from Marine Employers Drug Testing Guidance

Marine Employers Drug Testing Guidance

(What Marine Employers Need to Know About Drug Testing)

Prepared by:

U.S. Coast Guard Headquarters
Office of Investigations & Casualty Analysis (CG-545)
Drug and Alcohol Program Manager

September 2009

Page

FREQUENTLY ASKED QUESTIONS

Do I need a chemical-testing program?

A prevailing question that smaller commercial operators (employing only one or two employees) often ask is "Do the chemical testing regulations apply to me?" The answer is a big "Yes". The chemical testing regulations apply to most commercial vessel operations regardless of the number of employees and regardless of whether the vessel is inspected or uninspected. This includes "guide services" and self-employed mariners.

Do "independent contractors" or part time crewmembers need to be part of a marine employer's chemical testing program?

Again, the answer is "yes". If an individual meets the definition of a crewmember, as described in 46CFR16.105, they must be part of the chemical-testing program, regardless of how short the time period they work on board the vessel.

With bareboat charters, who is responsible for ensuring a drug-testing program is in place for that chartered vessel (the hired captain, vessel owner, people who chartered the vessel, etc.)?

The marine employer is responsible. This can be played out in several ways depending on the arrangements/contracts and should probably be looked at on a case-by-case basis. Any one of the people listed above can play the part of the marine employer. That person must have a chemical-testing program in place. See Enclosures 1 and 7 for assistance.

I change mates so frequently; do I have to obtain a pre-employment test for each mate?

The pre-employment test may be waived if one of the conditions under 46CFR16.210 is met, otherwise you must conduct a pre-employment test for each new-hire, and, must obtain the results of the test prior to engaging or employing the mariner aboard your vessel.

What are the penalties for violating these regulations?

The following enforcement actions may be taken for noncompliance with the Coast Guard chemical testing regulations:

- 1. Certificate of Inspection (COI) may be removed or not issued.
- 2. Civil Penalty for first time violators may be assessed of up to \$5,500.00 per violation, per day.
- 3. Suspension and Revocation (S & R) proceedings may be initiated against an individual's license, MMD, or COR.
- 4. Captain of the Port (COTP) order may be issued (prohibiting the operation of the vessels involved until compliance is gained).
- 5. Letter of Warning.
- 6. CG-835 (deficiency ticket) may be issued.

What are the responsibilities of a master, who is not the owner of the vessel or marine employer regarding the chemical testing regulations?

The master may be held accountable if the company policy designates the master with responsibilities regarding the marine employer's chemical testing program. The master could be charged with misconduct for violating company policy. Therefore, you as the master should confirm that your marine employer knows about the chemical testing regulations.

Are volunteers considered crewmembers and therefore subjected to the chemical testing regulations?

Yes, if the volunteer meets the definition of "crewmember." The payment status of a paid employee or serving as a volunteer does not change the requirement for chemical testing.

For which drugs are urine specimens being tested?

Marijuana, Cocaine, Opiates, Amphetamines, and Phencyclidine (PCP), are the five drugs tested for in a 5-panel DOT test.

Can urine samples be tested for alcohol following a Serious Marine Incident?

No. The only acceptable SMI tests for alcohol are saliva, breath or blood.

Does the Coast Guard accept hair testing for drugs?

No. The only drug test accepted by the Coast Guard for compliance with 46 CFR Part 16 is a 5-panel urine DOT test, collected and analyzed in accordance with the procedures established in 49 CFR 40.

What is the legal Blood Alcohol Concentration for crewmembers aboard commercial vessels?

A mariner is presumed to be under the influence if his or her BAC is greater than or equal to 0.040% and they are operating a vessel. The reference is 33 CFR Part 95.

Can I count post-accident/Serious Marine Incident drug tests towards my 50% random test rate?

No. While accidents are a random occurrence, post accident tests are to be counted only as post accident/SMI tests and not as randoms.

I operate a seasonal business. My crewmembers are college students that I hire at the start of the season and employ for about 5 months. Are these crewmembers required to be chemically tested?

Yes. First, each crewmember will have to be pre-employment tested unless they meet criteria for an exemption under 46 CFR 210. Secondly, these crewmembers must be subject to random testing during the season. You as the marine employer are then responsible for ensuring that 50% of all the deckhands you hire are randomly tested. Additionally, you as the marine employer must make sure those tests are spread reasonably throughout the operating season.

iv) CV and Details for Marc Fazioli

Name : Marc A. Fazioli

Citizenship : United States of America

Office Address : 12411 Donna Dr., Houston, Texas 77067

Qualifications : USCG issued Master's License w/ Radar Observer

STCW Certificate endorsed Tankerman (PIC)

FCC License - Marine Radio Operator / GMDSS Operator

OSHA Certification as Shipyard Competent Person

Education : BS - Marine Transportation

Texas A&M University

CAREER INFORMATION:

2007 - Present 3D Marine USA, Inc., Houston, Texas

Marine Surveyor / Consultant

2005 - 2007 Chugach Development Corporation, Anchorage, Alaska

Master / Harbor Pilot

2001 - 2005 3D Marine USA, Inc., Brownsville, Texas

Marine Surveyor / Consultant

2001 - 2005 Martech Unlimited, Inc. (Noble Denton Group), Beaumont, Texas

Pollution and Safety Advisor / Consultant

1996 - 2001 Maritime Overseas Corporation (OSG), New York, New York

Merchant Marine Officer

1999 Casino Padre Investment Company, South Padre Island, Texas

Master

1995 - 1996 Texas A&M University, Galveston, Texas

Lecturer, Department of Marine Transportation

1994 - 1995 Marine Transport Lines, Inc., Weehawken, New Jersey

Merchant Marine Officer

CAPTAIN MARC FAZIOLI

Captain Fazioli's thirty-four years of continuous experience in the maritime industry commenced in 1985 working as a sailing instructor at his family-owned recreational boat rental business in South Padre Island, Texas. Marc also worked as a Deckhand on Passenger/Fishing Vessels sailing from Port Isabel, Texas before pursuing a college degree and Merchant Marine License at the Texas Maritime Academy. After Ordinary Seaman and Cadet experience on Product Tankers and Container Ships with companies, including Coastal Tankships, Crest Tankers and Sea-Land Services, Marc graduated from Texas A&M University with a BS in Marine Transportation. His first Officer experience was with Marine Transport Lines on board Molten Sulphur Tankers. Marc then joined the Marine Transportation Department at Texas A&M University where he was responsible for instructing Cadets in Marine Safety, Lifesaving, Shiphandling and Seamanship. Marc returned to sea with Maritime Overseas Corporation (Overseas Shipholding Group) sailing as a Deck Officer on Crude Oil and Product Tankers, Geared Bulkers, and Ro/Ro vessels. During vacation periods from Maritime Overseas Corporation, Marc assisted in the start-up of an offshore gambling operation and served as Master of M/V ENTERTAINER during these periods. After coming ashore in 2001, Marc joined 3D Marine, assuming the duties as Manager of the Brownsville, Texas branch office.

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3D MARINE USA, INC.

Page

12411 Donna Drive, Houston, Texas 77067 Tel (281) 444-9495 (24 hours) Fax (281) 444-8874 e-mail: firm@3dmarine.com

<u>List of Admiralty Matters during Previous Four (4) Years</u>

Expert Witness Testimony by Capt. Marc Fazioli

1. Case No. 2:2013cv06278-LMA-SS

Shell Offshore, Inc. vs. International Offshore Services, L.L.C., International Boat Rentals,

Inc., Tesla Offshore, L.L.C. and International Marine, LLC

In the United States District Court for the Eastern District of Louisiana

Deposition: February 2015

Trial Testimony: February 2016 - Judge Africk

Case Description: Mobile Offshore Drilling Unit Damage

Attorneys: Frilot

2. Civil Action No. 1:13-cv-00318-WS-C

In Re: The Matter of Taira Lynn Limited No. 7, etc., et al., Praying for Exoneration From

or Limitation of Liability

In the United States District Court for the Southern District of Alabama, Southern Division

Deposition: January 2016

Case Description: Explosion during Barge Tank Cleaning Operations

Attorneys: Jones Walker

3. Cause No. 14-cv-0444

Jason Woods and Steven Smith vs. Saipem America, Inc., et. al. In the 405th Judicial District Court of Galveston County, Texas

Consolidated with; Cause No. 14-CV-0503

Steven Smith, Individually and as Next Friend of XXXXXXXXX XXXXX, a Minor vs. Saipem

America, Inc.; Saipem Norway; and Piling, Inc.

In the 56th Judicial District Court of Galveston County, Texas

Deposition: March 2016
Case Description: Small Boat Allision
Attorneys: Bland & Partners

4. C. A. No. 3:14-cy-00247

Efrain Irias vs. Starfleet Marine Transportation, Inc.

In the United States District Court for the Southern District of Texas, Galveston Division

Trial Testimony: June 2016 - Judge Hanks

Case Description: Personal Injury - Heavy Weather

Attorneys: Legge Farrow Kimmitt McGrath & Brown

5. Case No.: 8:15 CV 1806-T-23-JSS

Antoinette Dixon, as Personal Representative of the Estate of Robert L. Dixon vs. NYK Reefers Ltd., a foreign corporation; Cool Carriers AB, a foreign corporation; and NYK Cool

AB, a foreign corporation

In the United States District Court for the Middle District of Florida, Tampa Division

Deposition: July 2016

Case Description: Personal Injury - Crane Operations (Longshoreman Fatality)

Attorneys: Phelps Dunbar

Case 4:18-6VACCOON 2ND N-2-5985 Document 159-1 Filed 10/13/20 PageID.2418 Page

Troy Matthiews and his wife Tracy Matthiews vs. Crosby Tugs, LLC In the United States District Court for the Eastern District of Louisiana

Trial Testimony: December 2016 - Judge Vance

Case Description: Alleged Surge Incident - Personal Injury

Attorneys: Frilot

7. Case No. 3:15-cv-00170

In the Matter of Cooper Marine and Timberlands Corporation, as Owner Pro Hac Vice and Operator, and GATX Third Aircraft, LLC as Owner of the Barge CMT 123, Official No. 1067600, Praying for Exoneration From or Limitation of Liability

Consolidated with; Case No. 3:15-cv-350

Kassandra Nieves, Individually and as Personal Representative of the Estate of Juan Nieves and his Surviving Heirs and Dependents vs. Cooper Marine and Timberlands Corporation, et. al.

Consolidated with;

Case No. 3:15-cv-225

Robert L. Coleman, Special Administrator for the Estate of Nicolas Perez Hernandez, and his Surviving Heirs and Dependents vs. Cooper Marine and Timberlands Corporation, et. al.

In the United States District Court for the Eastern District of Arkansas, Jonesboro Division

Deposition: April 2017

Case Description: Barge Sinking (Longshoremen Fatalities)
Attorneys: Franke & Salloum / Bratton & O'Neal

8. Cause No. D-198065

Armando Villafuerte vs. Antillana Holding Inc. a/k/a Antilla Holdings Inc., Transgas Shipping Lines SAC, Transgas International Inc., Associated Marine Services, Inc., Anthony Andre Garrett, Richard Phillip Lopez, Eugene Blackwell, and Colin Andrew Lynd

In the 136th Judicial District Court of Jefferson County, Texas

Deposition: August 2017

Case Description: Personal Injury - Linehandling

Attorneys: Chamberlain, Hrdlicka, White, Williams & Aughtry

9. Civil Action No. 2:15-CV-1121

Ergon - St. James, Incorporated vs. PRIVOCEAN M/V, her engines, tackle, apparel, furniture, etc., in rem

Consolidated with;

Civil Action No. 2:15-CV-1137

Bravo Shipping Ltd. vs. Privocean Shipping Ltd.

Consolidated with;

Civil Action No. 2:15-CV-1206

In re: In the Matter of the Complaint of Privocean Shipping Limited, as Owner of the M/V PRIVOCEAN, Petitioning for Exoneration From or Limitation of Liability; Bariba

Corporation, as Managing Owner of the M/V PRIVOCEAN, Petitioning For

Exoneration From or Limitation of Liability

In the United States District Court for The Eastern District of Louisiana

Trial Testimony: April 2018 - Judge Zainey

Case Description: Allision Attorneys: Jones Walker

10. C.A. No. 17-00585

Devin Barrios and Megan Barrios vs. Centaur, L.L.C., Circle, L.L.C. and River Ventures, L.L.C.

In The United States District Court for the Eastern District of Louisiana

Trial Testimony: November 2018 - Judge Milazzo
Case Description: Personal Injury - Equipment Handling

Attorneys: Jones Walker

Case 4:18-cy-0007819-N1380 Document 159-1 Filed 10/13/20 PageID.2419 Page

Roel Lopez vs. Chipolbrok America, Inc., Chipolbrok Chinese-Polish Joint Stock

Shipping Company and Schroder Marine Services, Inc. In the 125th Judicial District Court of Harris County, Texas

Deposition: February 2019

Case Description: Personal Injury - Longshoreman

Attorneys: Abraham, Watkins, Nichols, Sorrels, Agosto & Aziz

12. Case No. 2:18-cr-00335

United States of America vs. Vjaceslavs Birzakovs

In the United States District Court for the Western District of Louisiana, Lake Charles

Division

Trial Testimony: May 2019 - Judge Zainey

Case Description: Oil Pollution / Oil Discharge Monitoring Equipment (ODME)

Attorneys: Jones Walker

13. Cause No. 2018-60608

Kristopher Panages vs. Martin Operating Partnership, L.P., SGS North America, Inc., Individually and doing business as SGS Petroleum Services Corporation and Martin Resource Management Corporation

In the 80th Judicial District Court of Harris County, Texas

Deposition: August 2019

Case Description: Personal Injury - Tankerman - Product Exposure Wilson Elser Moskowitz Edelman & Dicker

14. C. A. No. 2:18-cv-03056

Gerald Mingo vs. Great Lakes Dredge & Dock Company LLC of Louisiana In the United States District Court for the Eastern District of Louisiana

Deposition: August 2019

Case Description: Personal Injury - Crane Operations

Attorneys: Jones Walker

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Tel (281) 444-9495 (24 hours) Fax (281) 444-8874
E-mail: firm@3dmarine.com

3D MARINE USA, INC. - 2019 Schedule of Legal Fees **Captain Marc Fazioli**

Review of Documents: \$275.00 / hour

Court/Deposition Testimony: \$400.00 / hour with minimum of four hours

(\$1,600.00) plus expenses (cost +10%)

Retention Fee¹: \$5,000.00

plus necessary expenses as incurred

¹ A Retention Fee may be required when appointed by clients requiring Expert Witness / Consulting Services, and will be assessed on a case-by-case basis.

CURRICULUM VITAE

Name

Marc A. Fazioli

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	Pollution and Safety Advisor / Consultant
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	Merchant Marine Officer

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3D MARINE

Marine Consultants and Surveyors

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3D MARINE USA, INC. - 2018 Schedule of Legal Fees

Captain Marc Fazioli

Review of Documents1:

\$250.00 / hour

Court/Deposition Testimony:

\$400.00 / hour with minimum of four hours

(\$1,600.00) plus expenses (cost +10%)

Retention Fee²:

\$5,000.00

plus necessary expenses as incurred

¹ In circumstances where short notice is given and Reports are required within a period of less than two weeks, the rate will increase to \$275.00 / hour.

² A Retention Fee may be required when appointed by clients requiring Expert Witness / Consulting Services, and will be assessed on a case-by-case basis.

3D MARINE

Marine Consultants and Surveyors

3D MARINE USA, INC.

12411 Donna Drive, Houston, Texas 77067 Tel (281) 444-9495 (24 hours) Fax (281) 444-8874 E-mail: firm@3dmarine.com

List of Admiralty Matters

Expert Witness Testimony by Capt. Marc Fazioli

1. C.A. No. 3:07-CV-00434

Pelican Tug Co., L.L.C. vs. American Home Assurance Company

In the United States District Court for the Southern District of Texas, Galveston Division

Deposition: July 2009

Trial Testimony:

August 2009 - Judge Milloy

Case Description:

Insurance Dispute - Partial Sinking

Attorneys:

The Bale Law Firm

2. Cause No. 654-875

Stephen L. Willis and Corrina J. Willis vs. Noble Drilling (US), Inc., Century Exploration

of New Orleans, Inc. and King Engineering Corporation In the 24th Judicial District Court, Parish of Jefferson, State of Louisiana

Deposition:

Trial Testimony:

February 2010 May 2010 - Judge Darensburg

Case Description:

Personal Injury - Hazardous Material Exposure

Attorneys: Martzell & Bickford

3. Cause No. 2008-10-005497-D

Elias DeLeon vs. King Fisher Marine Service, Inc., King Fisher Marine Service, L.P. and

Orion Marine Group, Inc.

In the 103rd Judicial District Court of Cameron County, Texas

Deposition:

March 2010

Case Description:

Personal Injury - Line Handling

Attorneys:

Chamberlain, Hrdlicka, White, Williams & Martin

4. Civil Action No. 08-CV-3160

United States of America vs. Egan Marine Corporation, in personam, Motor Vessel LISA E., in rem, and Tank Barge EMC-423, in rem; and Egan Marine Corporation vs. Exxon Mobil Corporation and ExxonMobil Oil Corporation

In the United States District Court for the Northern District of Illinois, Eastern Division

Deposition:

May 2011

Trial Testimony:

September 2011 - Judge Leinenweber

Case Description:

Pollution Liability

Attorneys:

Troutman Sanders

5. Case No. 09 L 6212

Egan Marine Corporation vs. Exxonmobil Oil Corporation, Exxonmobile Oil Corporation, and Irving Francis Holm, Jr., Individually and/or as Agent of Exxonmobil Oil Corporation and/or Exxonmobile Oil Corporation

In the Circuit Court of Cook County, Illinois

Deposition:

May 2011

Case Description:

Barge Explosion

Attorney:

David R. Anderson

6. Civil Action No. 3:11-cv-00088

> Eugene Ceasar vs. Ryan Marine Services, Inc., Columbia Star, Inc., and Star Legacy, Inc. In the United States District Court for the Southern District of Texas, Galveston Division

Deposition:

March 2012

Trial Testimony:

March 2012 - Judge Hoyt

Case Description:

Personal Injury - Fall While Boarding Vessel

Attorneys:

Icenogle & Sullivan

7. Case No.: 4:11-cv-03447

> Oceaneering International, Inc. vs. Cross Logistics, Inc., National Union Fire Insurance Company of Pittsburgh, PA, Houston Casualty Company, National Liability and Fire Insurance Company, Northern Assurance Company, Markel Insurance Company, Zurich American Insurance Company and Navigators Insurance Company

In the United States District Court for the Southern District of Texas, Houston Division

Deposition:

March 2013

Trial Testimony:

January 2014 - Judge Werlein

Case Description:

Anchor Handling - Subsea Cable Damage

Attorneys:

Crain Cubbage Wilson

8. The Board of Pilot Commissioners for the Port of Corpus Christi Authority Public Hearing Regarding Rules for Piloting Vessels in the Port of Corpus Christi

Hearing Testimony: June 2013

Description:

Pilotage Guidelines

Client:

Port of Corpus Christi Authority

9. Civil Action No. 12-1545, Section K, Magistrate 4

Jonathan D. Carter vs. Hornbeck Offshore Transportation, L.L.C. and Hornbeck Offshore Operators, L.L.C.

In the United States District Court for the Eastern District of Louisiana

Deposition:

November 2013

Case Description:

Personal Injury - Material Handling

Attorneys:

Johnson, Johnson, Barrios and Yacoubian

10. C.A. No. 2012-43255

Juan Javier Ledezma vs. Orion Marine Construction, Inc. and Orion Marine Group, Inc.

In the 61st Judicial District Court of Harris County, Texas

Deposition:

December 2013

Case Description:

Personal Injury - Slip and Fall (Shipyard)

Attorneys:

Chamberlain, Hrdlicka, White, Williams & Aughtry

Case No. 2:2013cv02385, Section F, Magistrate 3 11.

Grand Ltd., Laredo Offshore Services, Inc., Atlantic Specialty Insurance Company, Markel American Insurance Company, Procentury Insurance Company, Catlin Indemnity Company, United States Fire Insurance Company, and Certain Underwriters at Lloyd's vs. Linder Oil Company, A Partnership, Linder Energy Company, Louisiana General Oil Company, Destin Resources, L.L.C., Reserves Management, L.C. and Sojitz Energy Venture, Inc.

In the United States District Court for the Eastern District of Louisiana Deposition:

Case Description:

February 2014

Allision

Attorneys:

Leefe Gibbs Sullivan & Dupre

12. Case No. 1:10-CR-00033

United States of America vs. Dennis Michael Egan and Egan Marine Corporation In the United States District Court for the Northern District of Illinois, Eastern Division Trial Testimony:

Case Description:

May 2014 - Judge Zagel Seaman's Manslaughter

Attorneys:

William O. Walters / Steven N. Fritzshall

13. Case No. 2:2013cv00398

Plains Pipeline, L.P. and Phillips 66 Pipeline, LLC vs. Great Lakes Dredge & Dock Company, Great Lakes Dredge and Company, LLC of Louisiana, Dawn Services LLC, in personal, and the Dredge TEXAS, Tugs PACIFIC DAWN and COASTAL DAWN, and their Engines, Tackle, Furniture, Appurtenances, etc., in rem

In the United States District Court for the Eastern District of Louisiana

Deposition: Case Description:

September 2014 Pipeline Damage Fowler Rodriguez

Attorneys:

14.

Cause No. 2012-24614

Inocente Cepeda vs. Orion Marine Construction, Inc.

In the 190th Judicial District Court of Harris County, Texas

Deposition:

December 2014

Case Description:

Personal Injury - Small Boat Operations

Attorneys:

Munsch Hardt Kopf & Harr

15. Case No. 2:2013cv06278-LMA-SS

Shell Offshore, Inc. vs. International Offshore Services, L.L.C., International Boat Rentals, Inc., Tesla Offshore, L.L.C. and International Marine, LLC

In the United States District Court for the Eastern District of Louisiana

Deposition:

February 2015

Trial Testimony:

February 2016 - Judge Africk

Case Description:

Mobile Offshore Drilling Unit Damage

Attorneys:

Frilot

16. C.A. No. 3:13-cv-00202

Profit Shipping Ltd. and Genel Denizcilik Nakliyati A.S. vs. M/V IMPERIAL SPIRIT, her Engines, Tackle, Appurtenances, etc., in rem; Ladarien Navegacion, S.A.,; and Northstar Ship Management Ltd., in Personam

In the United States District Court for the Southern District of Texas, Galveston Division

Deposition:

March 2015

Trial Testimony:

August 2015 - Judge Hanks

Case Description:

Attorneys:

Collision Eastham Watson Dale & Forney

17. Civil Action No. S13C-08033 ESB

Alesia G. Lozito vs. Delaware River & Bay Authority vs. Survitec, SAS and DBC Marine Safety Systems, Ltd.

In the Superior Court of the State of Delaware, in and for Sussex County

Deposition:

October 2015

Case Description:

Personal Injury - Lifesaving Equipment

Attorneys:

Reeves McEwing

18. Civil Action No. 09-2092 (FAB)

Eliezer Cruz-Aponte, et. al. vs. Caribbean Petroleum Corp., et. al. In the United States District Court for the District of Puerto Rico

Deposition:

October 2015

Case Description:

Shore Tank Explosion (Class Action)

Attorneys:

Salas & Company

19. Civil Action No. 1:13-cv-00318-WS-C

In Re: The Matter of Taira Lynn Limited No. 7, etc., et al., Praying for Exoneration From or Limitation of Liability

In the United States District Court for the Southern District of Alabama, Southern Division

Deposition:

January 2016

Case Description:

Explosion during Barge Tank Cleaning Operations

Attorneys:

Jones Walker

20. Cause No. 14-cv-0444

Jason Woods and Steven Smith vs. Saipem America, Inc., et. al. In the 405th Judicial District Court of Galveston County, Texas

Consolidated with; Cause No. 14-CV-0503

Steven Smith, Individually and as Next Friend of XXXXXXXXXXXXX, a Minor vs. Saipem

America, Inc.; Saipem Norway; and Piling, Inc. In the 56th Judicial District Court of Galveston County, Texas

Deposition:

March 2016

Case Description: Attorneys:

Small Boat Allision Bland & Partners

21. C. A. No. 3:14-cv-00247

Efrain Irias vs. Starfleet Marine Transportation, Inc.

In the United States District Court for the Southern District of Texas, Galveston Division

Trial Testimony:

June 2016 - Judge Hanks

Case Description:

Personal Injury - Heavy Weather

Attorneys:

Legge Farrow Kimmitt McGrath & Brown

22. Case No.: 8:15 CV 1806-T-23-JSS

> Antoinette Dixon, as Personal Representative of the Estate of Robert L. Dixon vs. NYK Reefers Ltd., a foreign corporation; Cool Carriers AB, a foreign corporation; and NYK Cool AB, a foreign corporation

In the United States District Court for the Middle District of Florida, Tampa Division

Deposition:

July 2016

Case Description:

Personal Injury - Crane Operations (Longshoreman Fatality)

Attorneys:

Phelps Dunbar

23. Civil Action No. 15-5985

> Troy Matthiews and his wife Tracy Matthiews vs. Crosby Tugs, LLC In the United States District Court for the Eastern District of Louisiana

Trial Testimony:

December 2016 - Judge Vance

Case Description:

Alleged Surge Incident - Personal Injury

Attorneys:

Frilot

Case No. 3:15-cv-00170 24.

In the Matter of Cooper Marine and Timberlands Corporation, as Owner Pro Hac Vice and Operator, and GATX Third Aircraft, LLC as Owner of the Barge CMT 123, Official No. 1067600, Praying for Exoneration From or Limitation of Liability and,

Case No. 3:15-cv-350; Kassandra Nieves, Individually and as Personal Representative of the Estate of Juan Nieves and his Surviving Heirs and Dependents vs. Cooper Marine and Timberlands Corporation, et. al. and.

Case No. 3:15-cv-225

Robert L. Coleman, Special Administrator for the Estate of Nicolas Perez Hernandez, and his Surviving Heirs and Dependents vs. Cooper Marine and Timberlands Corporation, et. al.

In the United States District Court for the Eastern District of Arkansas, Jonesboro Division

Deposition:

April 2017

Case Description:

Barge Sinking (Longshoremen Fatalities)

Attorneys:

Franke & Salloum / Bratton & O'Neal

Case 4:18-cv-00072-DN-PK Document 159-1 Filed 10/13/20 PageID.2427 Page 57 of 57

25. Cause No. D-198065

Armando Villafuerte vs. Antillana Holding Inc. a/k/a Antilla Holdings Inc., Transgas Shipping Lines SAC, Transgas International Inc., Associated Marine Services, Inc., Anthony Andre Garrett, Richard Phillip Lopez, Eugene Blackwell, and Colin Andrew Lynd In the 136th Judicial District Court of Jefferson County, Texas

Deposition:

August 2017

Case Description:

Personal Injury - Linehandling

Attorneys:

Chamberlain, Hrdlicka, White, Williams & Aughtry

26. Civil Action No. 2:15-CV-1121

Ergon - St. James, Incorporated vs. PRIVOCEAN M/V, her engines, tackle, apparel, furniture, etc., in rem

Consolidated with;

Civil Action No. 2:15-CV-1137

Bravo Shipping Ltd. vs. Privocean Shipping Ltd.

Consolidated with;

Civil Action No. 2:15-CV-1206

In re: In the Matter of the Complaint of Privocean Shipping Limited, as Owner of the M/VPRIVOCEAN, Petitioning for Exoneration From or Limitation of Liability; Bariba Corporation, as Managing Owner of the M/V PRIVOCEAN, Petitioning For Exoneration From or Limitation of Liability

In the United States District Court for The Eastern District of Louisiana

Trial Testimony:

April 2018 - Judge Zainey

Case Description:

Allision Jones Walker

Attorneys: